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KARDOS, NEIL R				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/673,115

Applicant(s)

FLOCKHART ET AL.

Examiner

Neil R. Kardos

Art Unit

3623

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-20 and 31-41 is/are pending in the application.
- 4a) Of the above claim(s) 33-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-20, 31, 32, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date 6/25/08, 11/21/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This is a **FINAL** Office action on the merits in response to communications filed on August 7, 2008. Claims 1-4, 6-7, 9-12, 14-17, and 20 have been amended. Claims 5 and 21-30 have been cancelled. Claims 31-41 have been added. Claims 33-39 have been withdrawn due to election by original presentation. Currently, claims 1-4, 6-20, 31-32, and 40-41 are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection presented below are necessitated by Applicant's amendments to the claims.

Response to Amendment

3. Applicant's amendments and additional claims have been acknowledged. Applicant's amendments to claim 12 are not sufficient to overcome the § 101 rejection set forth in paragraph 5 of the previous Office action. Accordingly, this rejection has been reasserted below. New prior art rejections have been asserted below. Claims 33-39 have been withdrawn due to election by original presentation, as explained below.

Applicant's amendments to the specification are acknowledged. These amendments are believed to have introduced new matter. See the rejection below.

Election/Restrictions

4. Newly submitted claims 33-39 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The original and newly claimed inventions are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, the new subcombination (claims 33-39) has separate utility such as converting real time to business time and business time to real time (not including any allocation of resources as per the original invention). See MPEP § 806.05(d).

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 33-39 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

5. The disclosure is objected to because of the following informalities:

The amendment filed on August 7, 2008 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Response, page 2, paragraph 2: "A time interval can be determined (see step 412) by adding, to the business time index, a service commitment time." Referencing step 412 of figure 7, there is no disclosure of adding a service commitment time to the business time index. Examiner requests that Applicant either point out where in the original disclose this amendment is supported or cancel the new matter in the reply to this Office Action.

Due to a lack of support for the above amendment in the original disclosure, the following amendment should also be cancelled: Response, page 3, paragraph 3: "In one configuration, the time interval is computed as discussed above with reference to Fig. 6."

Claim Objections

- 6. Claims 11, 16, and 31 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.**

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 11 and 16: Applicant states that “taking the modulus” means that the remainder is determined when a calendar time is divided by the minimum time interval (see Remarks, page 13). If this is the case, claims 11 and 16 do not further limit claims 10 and 15. See also § 112 rejection, below.

Claim 31: Claim 31 is directed to computer-readable mediums having computer-executable instructions for performing the steps of claim 1. This claim is improper because it fails the “infringement test” (see MPEP 608.01(n), Section III). Applying the infringement test, what is needed to infringe claim 31 is, for example a CD-ROM having computer executable code that if and when executed would cause a computer to do the steps recited in claim 1. However, such a CD-ROM would not infringe the method steps of claim 1 since the CD-ROM itself never performs any of the active steps required by the method of claim 1. In other words, mere possession of such a CD-ROM would infringe claim 31, but would not infringe claim 1. Thus, claim 31 is an improper dependent claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 12-20 and 41 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 12: Claim 12 is directed toward a system. However, the claim does not positively recite any elements that necessarily constitute a system or apparatus, such as computer hardware. Rather, the claim could be directed to software. Software per se is not patentable under § 101; therefore, the claimed invention does not fall within a statutory class of patentable subject matter.

Claims 13-20 and 41: Dependent claims 13-20 and 41 are rejected for failing to remedy the deficiencies of the claims from which they depend.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 9-11, 14-16, and 40-41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 9 and 14: Claims 9 and 14 recite “converting each of the corresponding business time intervals into corresponding modified service times.” This limitation is not supported by the specification as originally filed.

Claims 40-41: The claims recite “combining, by a computer, the business time interval with a service time to provide a modified service time.” This limitation is not supported by the specification as originally filed.

Claims 10-11 and 15-16: Dependent claims 10-11 and 15-16 are rejected because they contain the limitations of claims 9 and 14, rejected above.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 9-11 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9: Claim 9 refers back to “said displaying step” of claim 8. However, it is not clear what is being displayed in claim 9. Claim 9 appears to be a way to convert or index a real time into a business time. It is not clear how this relates to the displaying of claim 8.

It is also not clear from the claims or the specification how service times are converted into a real time index. The specification discusses converting real time to business time and vice versa, but there is no disclosure as to converting a service time associated with a work item (e.g.

a 3 minute phone call) into a real time index. Isn't the service time already a "real time"? A service time of three minutes for a phone call or one business day for an email would seem to already be in real time because it does not span multiple days or breaks that include non-business time. Why is a conversion necessary?

In Examiner's best understanding, the method of claim 9 determines a service/duration time for tasks, converts these service/duration times into a real/absolute time (although it is not clear what this step accomplishes), and then converts the real/absolute time into a business/working time according to a working schedule or calendar. The claim also contains non-functional descriptive material (i.e. there are many "labels" for different times—service time, real time, business time, modified service time—that are not clearly understood). Examiner recommends amending the claims to clarify the meaning of these elements and the overall process. Art has been applied to claim 9 as best understood.

Claim 10: Claim 10 refers back to "said indexing step" of claim 9. However, Applicant's amendment has cancelled the indexing step of claim 9. Therefore, it is unclear what step Applicant is referring back to in claim 10. Clarification is required.

Furthermore, one of ordinary skill in the art would not understand what is occurring in claim 10. Neither the claim language nor the specification clarify the claimed process. For example, what is a calendar start time? When does a calendar "start"? How is the selected real time "selected"? Where does the real time come from and what does it relate to? Examiner is not able to make any sense of the last two limitations, and the specification merely restates the limitations. How is the outputting adjusted time incorporated into the process?

Also, Applicant states that “taking the modulus” means that the remainder is determined when a calendar time is divided by the minimum time interval (see Remarks, page 13). First, it is not clear how time is divided. What is the result of 4:00 divided by 5:30? Further, based on Applicant’s definition of modulus, claim 11 is redundant. If taking the modulus is equivalent to determining the remainder of a division operation, claim 11 is unnecessary.

Because claim 10 is so indefinite, no art rejection is warranted as substantial guesswork would be involved in determining the scope and content of these claims. *See in re Steele*, 305 F.2d 859, 134 USPQ 292 (CCPA 1962); *Ex parte Brummer*, 12 USPQ 2d, 1653, 1655 (BPAI 1989); *see also in re Wilson*, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). Prior art pertinent to the disclosed invention is nevertheless cited and applicants are reminded they must consider all cited art under Rule 111(c) when amending the claims to conform with 35 U.S.C. 112.

Claim 11: Claim 11 is rejected for the reasons stated above. Prior art has not been applied to claim 11 for the reasons stated above.

Claims 14-16: Claims 14-16 are substantially similar to claims 9-11 and are rejected under similar rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-4, 6-20, 31-32, and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burok (US 2003/0152212) in view of Eder, “Time Management in Workflow Systems.”

Claim 1: Burok discloses a method of allocating resources, comprising:

- providing a resource allocation system comprising (i) at least one queue of work items, each of the work items having an associated service time (see ¶¶ 20 and 46), and (ii) at least one resource to service the work items in the at least one queue (see figures 7 and 10; abstract; ¶ 45); ;
- based on at least one of a service time and remaining time, allocating, by a computer, resources associated with said at least one queue to service work items according to predetermined algorithms (see ¶ 47).

Burok teaches a non-business time period that is ignored in determining at least one of a service time and a time remaining in the at least one queue for work items positioned at queue positions farther from a head of the at least one queue than the at least one position of the time delay (see ¶ 57, disclosing that a time of 45 days should be converted to working hours instead of days). Burok also suggests delays (see ¶ 58).

Burok does not explicitly disclose placing a time delay corresponding to a non-business time period in at least one position of said at least one queue. Eder discloses using a calendar to convert relative deadlines to absolute time points (see § 2.2, ¶ 2; § 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teachings of Eder to include a delay in a queue that corresponds to a non-business time. One of

ordinary skill in the art would have been motivated to do so for the benefit of a more accurate prediction of when a task will be completed.

Furthermore, Examiner takes Official Notice that it was well-known in the art at the time the invention was made to use delays in queues. For example, Burok suggests that if an item is due in one business day (e.g. a phone call at 4 p.m. on Monday is due at 4 p.m. on Tuesday), that item should be expressed as being due in 8 working hours. Thus, there would be a delay from 5 p.m. on Monday until 9 a.m. on Tuesday where the working hours would not be counted toward the remaining time in the commitment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use such delays in queues for the benefit of generating a more accurate prediction of the remaining time for completing a task.

Claim 2: Burok discloses wherein said placing step comprises:

- accessing a calendar associated with at least one queue, said calendar including entries corresponding to business time and non-business time (see ¶ 57, disclosing a schedule based on the operating hours of a business);
- determining when a non-business time period begins (see id., disclosing a business that operates between the hours of 8 am and 5 pm; thus, the non-business time period begins at 5 pm).

Burok does not explicitly disclose placing a duration of said non-business time period in a selected position in said at least one queue to indicate when said non-business time begins. However, a similar limitation was rejected in claim 1 using Burok and Eder (and alternatively, Official Notice); this limitation is rejected under similar rationale.

Claims 3-4: Burok does not explicitly disclose wherein said selected position is at the head or tail of said at least one queue. Examiner takes Official Notice that it was well-known in the art at the time the invention was made to use delays whenever they will actually occur. For example, claim 2 recites that the non-business time is placed in a position in the queue that indicates when the non-business time begins. Therefore, if the non-business time were to occur at the head of the queue, it would be placed at the head, and likewise for the tail. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert the delay wherever it actually occurs for the benefit of an accurate representation of when such the non-business time actually occurs.

Burok also does not explicitly disclose wherein said at least one queue is a delta queue. Examiner takes Official Notice that it was well-known in the queueing arts at the time the invention was made to use delta queues (see Applicant's admission that delta queues are known in the art: Flockhart 2005/0071212, ¶ 27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate well-known queueing theories into the method by Burok. One of ordinary skill in the art would have been motivated to do so for the benefit of efficiencies gained by using delta queues, which are well-known in the art.

Claim 6: Burok discloses wherein said at least one queue includes a plurality of queues of work items (see ¶ 53, disclosing a third workflows made up of a first and second workflow), each of said plurality of queues having an associated calendar indicating business time and non-business time periods (see ¶ 57).

Claim 7: Burok discloses wherein said predetermined algorithms perform resource allocation independently of the calendar associated with the queues (see ¶ 47).

Claim 8: Burok discloses displaying, at a user interface, a resource status associated with a first queue of said plurality of queues (see figure 8, "Resources Available"). Burok does not explicitly disclose displaying a real time clock. However, Examiner takes Official Notice that it was well-known in the art at the time the invention was made to display a real time clock on a user interface (e.g. Microsoft Windows start menu has a real time clock). It would have been obvious to one of ordinary skill in the art at the time the invention was made to display a real time clock and a resource status on the same display. This combination of known elements retains the functionality of the separate elements and produces a result that would be predictable to one of ordinary skill in the art.

Claim 9: It would at least be obvious in view of Burok and Eder to carry out the following steps:

- determining service times for work items in said first queue (see Eder, § 2.2, ¶ 1);
- selecting a calendar associated with said first queue (see Eder, § 2.2, ¶ 2; § 4);
- converting each of the service times into an equivalent real time index (see id.; see also figure 3);
- thereafter determining, for each of the real time indices, a corresponding business time interval (see id.); and

- converting each of the corresponding business time intervals into corresponding modified service times (see figure 4).

In Examiner's best understanding, the method of claim 9 determines a service/duration time for tasks (§ 2.2 of Eder), converts these service/duration times into a real/absolute time for the entire workflow (figure 3 of Eder), and then converts the real/absolute time into a business/working time (figure 4 of Eder). If Applicant means something else by these limitations, Examiner requests that Applicant amend the claim to clarify the process. The claim contains non-functional descriptive material (i.e. there are many "labels" for different times—service time, real time, business time, modified service time—that are not clearly understood). Although Eder may not teach the identical labels given to the terms in the claim, Eder manipulates data in the same way as the claimed invention to achieve the same result. Thus, the prior art and the claimed invention have identical function and the claimed descriptive material is insufficient to distinguish the claimed invention over the prior art. *see In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994); *MPEP* 2106.

Burok and Eder are related in that they are directed to tasks in a queue. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the commitment times of Burok to convert real time to business time as taught by Eder. One of ordinary skill in the art would have been motivated to do so for the benefit of a more accurate representation of when the commitment is actually due.

Claim 12: Claim 12 is substantially similar to claim 1 and is rejected under similar rationale.

Claims 13-14: Claims 13-14 are substantially similar to claims 8-9 and are rejected under similar rationale.

Claims 17-19: Claims 17-19 are substantially similar to claims 2-4 and are rejected under similar rationale.

Claim 20: Claim 20 is substantially similar to claim 7 and is rejected under similar rationale.

Claim 31: Burok discloses a computer readable medium comprising computer executable instructions (see Burok claim 26).

Claim 32: Burok and Eder do not explicitly disclose wherein the time delay stops a clock associated with the at least on queue for the duration of the time delay. Examiner takes Official Notice that it was well-known in the art at the time the invention was made to stop clocks for time delays (e.g. in sports contests). It would have been obvious to one of ordinary skill in the art at the time the invention was made to stop a clock for an associated time delay in the queues of Burok and Eder. One of ordinary skill in the art would have been motivated to do so for the benefit of keeping accurate time.

Claims 40-41: Claims 40 and 41, as best understood by Examiner, converts real time to business time, adds a service time to the business time to create a modified service time, and converts the modified service time back to real time.

Eder discloses converting real time to business time (see § 2.1, ¶ 4; § 2.2, ¶ 2; § 4) and creating a modified service time (see § 2.2, ¶ 2; see also figures 3-4). Eder does not explicitly disclose converting business time back to real time. However, Examiner takes Official Notice that it was well-known in the art at the time the invention was made to convert between time scales using an index. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform these conversions with Eder and Burok. One of ordinary skill in the art would have been motivated to do so for the benefit of an accurate representation of time.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil R. Kardos
Examiner
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Primary Examiner, Art Unit 3623